

Spool File For Oracle Students Trained by Mr.Sathish Yellanki

SQL> cl scr

```
SQL> SELECT
  2 Deptno,
  3 Job,
  4 MGR,
  5 TO_CHAR(HireDate, 'YYYY') Year,
  6 TO_CHAR(HireDate, 'Q') Quarter,
  7 TO_CHAR(HireDate, 'Month') Months,
  8 TO_CHAR(HireDate, 'W') Week,
  9 TO_CHAR(HireDate, 'Day') Day,
10 SUM(Sal)
11 FROM Emp
12 GROUP BY
13 GROUPING SETS
14 (
15 Deptno,
16 Job,
17 MGR,
18 TO_CHAR(HireDate, 'YYYY'),
19 TO_CHAR(HireDate, 'Q'),
20 TO_CHAR(HireDate, 'Month'),
21 TO_CHAR(HireDate, 'W'),
22 TO_CHAR(HireDate, 'Day')
23 )
24
```

SQL> SET AUTOTRACE ON EXPLAIN

SQL> /

DEPTNO	JOB	MGR	YEAR	Q	MONTHS	W	DAY	SUM(SAL)
30								9400
20								10875
10								8750
	SALESMAN							5600
	CLERK							4150
	PRESIDENT							5000
	MANAGER							8275
	ANALYST							6000
								5000
		7839						8275
		7782						1300
		7698						6550
		7902						800
		7566						6000
		7788						1100
			1980					800

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```

1983 1100
1982 4300
1981 22825
1 5250
3 2750
4 12750
2 8275
September 2750
December 7750
January 2400
June 2450
November 5000
April 2975
February 2850
May 2850
1 9775
3 7400
2 8050
4 3800
Sunday 1250
Friday 4450

```

DEPTNO	JOB	MGR	YEAR	Q	MONTHS	W	DAY	SUM(SAL)
							Thursday	9925
							Monday	1250
							Wednesday	1900
							Tuesday	8950
							Saturday	1300

42 rows selected.

Execution Plan

Plan hash value: 3399230852

Id	Operation	Name	Rows
0	SELECT STATEMENT		14
1	TEMP TABLE TRANSFORMATION		

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2	LOAD AS SELECT		
3	TABLE ACCESS FULL	EMP	14
756	3 (0) 00:00:01		
4	LOAD AS SELECT		
5	HASH GROUP BY		1
26	3 (34) 00:00:01		
6	TABLE ACCESS FULL	SYS_TEMP_0FD9D6602_A90440	1
26	2 (0) 00:00:01		
7	LOAD AS SELECT		
8	HASH GROUP BY		1
19	3 (34) 00:00:01		
9	TABLE ACCESS FULL	SYS_TEMP_0FD9D6602_A90440	1
19	2 (0) 00:00:01		
10	LOAD AS SELECT		
11	HASH GROUP BY		1
26	3 (34) 00:00:01		
12	TABLE ACCESS FULL	SYS_TEMP_0FD9D6602_A90440	1
26	2 (0) 00:00:01		
13	LOAD AS SELECT		
14	HASH GROUP BY		1
17	3 (34) 00:00:01		
15	TABLE ACCESS FULL	SYS_TEMP_0FD9D6602_A90440	1
17	2 (0) 00:00:01		
16	LOAD AS SELECT		
17	HASH GROUP BY		1
15	3 (34) 00:00:01		
18	TABLE ACCESS FULL	SYS_TEMP_0FD9D6602_A90440	1
15	2 (0) 00:00:01		
19	LOAD AS SELECT		
20	HASH GROUP BY		1
19	3 (34) 00:00:01		
21	TABLE ACCESS FULL	SYS_TEMP_0FD9D6602_A90440	1
19	2 (0) 00:00:01		
22	LOAD AS SELECT		
23	HASH GROUP BY		1
15	3 (34) 00:00:01		
24	TABLE ACCESS FULL	SYS_TEMP_0FD9D6602_A90440	1
15	2 (0) 00:00:01		

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```
-----
| 25 |      LOAD AS SELECT      |          |          |
|    |          |          |          |
| 26 |      HASH GROUP BY      |          |          |
19 |      3      (34) | 00:00:01 |
| 27 |      TABLE ACCESS FULL  | SYS_TEMP_0FD9D6602_A90440 |          |
19 |      2      (0) | 00:00:01 |
| 28 |      VIEW                |          |          |
65 |      2      (0) | 00:00:01 |
| 29 |      TABLE ACCESS FULL  | SYS_TEMP_0FD9D6603_A90440 |          |
65 |      2      (0) | 00:00:01 |
-----
```

Note

- dynamic sampling used for this statement

SQL> cl scr

SQL> SET AUTOTRACE OFF EXPLAIN

SQL> cl scr

```
SQL> SELECT
  2  Ename,
  3  Deptno,
  4  CASE Deptno
  5    WHEN 10 THEN 'ACCOUNTING'
  6    WHEN 20 THEN 'RESEARCH'
  7    WHEN 30 THEN 'SALES'
  8    WHEN 40 THEN 'OPERATIONS'
  9    ELSE 'NOT FOUND'
 10  END Dname
 11  FROM Emp;
```

ENAME	DEPTNO	DNAME
KING	10	ACCOUNTING
BLAKE	30	SALES
CLARK	10	ACCOUNTING
JONES	20	RESEARCH
MARTIN	30	SALES
ALLEN	30	SALES
TURNER	30	SALES
JAMES	30	SALES
WARD	30	SALES
FORD	20	RESEARCH
SMITH	20	RESEARCH

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```
SCOTT          20 RESEARCH
ADAMS          20 RESEARCH
MILLER         10 ACCOUNTING
```

14 rows selected.

```
SQL> ED
Wrote file afiedt.buf
```

```
1  SELECT
2  Ename,
3  Deptno,
4  CASE Deptno
5    WHEN 10 THEN 'ACCOUNTING'
6    WHEN 30 THEN 'SALES'
7    WHEN 40 THEN 'OPERATIONS'
8    ELSE 'NOT FOUND'
9  END Dname
10* FROM Emp
SQL> /
```

ENAME	DEPTNO	DNAME
KING	10	ACCOUNTING
BLAKE	30	SALES
CLARK	10	ACCOUNTING
JONES	20	NOT FOUND
MARTIN	30	SALES
ALLEN	30	SALES
TURNER	30	SALES
JAMES	30	SALES
WARD	30	SALES
FORD	20	NOT FOUND
SMITH	20	NOT FOUND
SCOTT	20	NOT FOUND
ADAMS	20	NOT FOUND
MILLER	10	ACCOUNTING

14 rows selected.

```
SQL> ED
Wrote file afiedt.buf
```

```
1  SELECT
2  Ename,
3  Deptno,
4  CASE Deptno
```

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```
5  WHEN 10 THEN 'ACCOUNTING'
6  WHEN 30 THEN 'SALES'
7  WHEN 40 THEN 'OPERATIONS'
8  END Dname
9* FROM Emp
SQL> /
```

ENAME	DEPTNO	DNAME
KING	10	ACCOUNTING
BLAKE	30	SALES
CLARK	10	ACCOUNTING
JONES	20	
MARTIN	30	SALES
ALLEN	30	SALES
TURNER	30	SALES
JAMES	30	SALES
WARD	30	SALES
FORD	20	
SMITH	20	
SCOTT	20	
ADAMS	20	
MILLER	10	ACCOUNTING

14 rows selected.

```
SQL> SELECT
2  Ename,
3  Deptno,
4  DECODE( Deptno
5    , 10 , 'ACCOUNTING'
6    , 20 , 'RESEARCH'
7    , 30 , 'SALES'
8    , 40 , 'OPERATIONS'
9    , 'NOT FOUND'
10 ) Dname
11 FROM Emp;
```

ENAME	DEPTNO	DNAME
KING	10	ACCOUNTING
BLAKE	30	SALES
CLARK	10	ACCOUNTING
JONES	20	RESEARCH
MARTIN	30	SALES
ALLEN	30	SALES
TURNER	30	SALES

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```
JAMES          30 SALES
WARD           30 SALES
FORD           20 RESEARCH
SMITH          20 RESEARCH
SCOTT          20 RESEARCH
ADAMS          20 RESEARCH
MILLER         10 ACCOUNTING
```

14 rows selected.

```
SQL> clear
SQL> cl scr
```

```
SQL> SELECT
  2  Ename,
  3  Deptno,
  4  CASE
  5    WHEN Deptno = 10 THEN 'ACCOUNTING'
  6    WHEN Deptno = 20 THEN 'RESEARCH'
  7    WHEN Deptno = 30 THEN 'SALES'
  8    WHEN Deptno = 40 THEN 'OPERATIONS'
  9    ELSE 'Not Specified'
 10 END Dname
 11 FROM Emp;
```

ENAME	DEPTNO	DNAME
KING	10	ACCOUNTING
BLAKE	30	SALES
CLARK	10	ACCOUNTING
JONES	20	RESEARCH
MARTIN	30	SALES
ALLEN	30	SALES
TURNER	30	SALES
JAMES	30	SALES
WARD	30	SALES
FORD	20	RESEARCH
SMITH	20	RESEARCH
SCOTT	20	RESEARCH
ADAMS	20	RESEARCH
MILLER	10	ACCOUNTING

14 rows selected.

```
SQL> SELECT
  2  Ename,
  3  Sal,
```

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```
4 CASE
5 WHEN Sal >= 800 AND Sal <= 2000
6 THEN 'LOWEST PAY'
7 WHEN Sal >= 2001 AND Sal <= 4000
8 THEN 'MODERATE PAY'
9 ELSE 'HIGH PAY'
10 END Remarks
11 FROM Emp;
```

ENAME	SAL	REMARKS
KING	5000	HIGH PAY
BLAKE	2850	MODERATE PAY
CLARK	2450	MODERATE PAY
JONES	2975	MODERATE PAY
MARTIN	1250	LOWEST PAY
ALLEN	1600	LOWEST PAY
TURNER	1500	LOWEST PAY
JAMES	950	LOWEST PAY
WARD	1250	LOWEST PAY
FORD	3000	MODERATE PAY
SMITH	800	LOWEST PAY
SCOTT	3000	MODERATE PAY
ADAMS	1100	LOWEST PAY
MILLER	1300	LOWEST PAY

14 rows selected.

SQL> ED

Wrote file afiedt.buf

```
1 SELECT
2 Ename,
3 Sal,
4 CASE
5 WHEN Sal BETWEEN 800 AND 2000
6 THEN 'LOWEST PAY'
7 WHEN Sal BETWEEN 2001 AND 4000
8 THEN 'MODERATE PAY'
9 ELSE 'HIGH PAY'
10 END Remarks
11 FROM Emp
SQL> /
```

ENAME	SAL	REMARKS
KING	5000	HIGH PAY

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```
BLAKE          2850 MODERATE PAY
CLARK          2450 MODERATE PAY
JONES          2975 MODERATE PAY
MARTIN         1250 LOWEST PAY
ALLEN          1600 LOWEST PAY
TURNER         1500 LOWEST PAY
JAMES          950  LOWEST PAY
WARD           1250 LOWEST PAY
FORD           3000 MODERATE PAY
SMITH          800  LOWEST PAY
SCOTT          3000 MODERATE PAY
ADAMS          1100 LOWEST PAY
MILLER         1300 LOWEST PAY
```

14 rows selected.

SQL> cl scr

SQL> SELECT * FROM Emp;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL
COMM	DEPTNO				
	7839 KING	PRESIDENT		17-NOV-81	5000
10	7698 BLAKE	MANAGER	7839	01-MAY-81	2850
30	7782 CLARK	MANAGER	7839	09-JUN-81	2450
10	7566 JONES	MANAGER	7839	02-APR-81	2975
20	7654 MARTIN	SALESMAN	7698	28-SEP-81	1250
1400	30				
	7499 ALLEN	SALESMAN	7698	20-FEB-81	1600
300	30				
	7844 TURNER	SALESMAN	7698	08-SEP-81	1500
0	30				
	7900 JAMES	CLERK	7698	03-DEC-81	950
30	7521 WARD	SALESMAN	7698	22-FEB-81	1250
500	30				
	7902 FORD	ANALYST	7566	03-DEC-81	3000
20					
	7369 SMITH	CLERK	7902	17-DEC-80	800
20					

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```
.....
      7788 SCOTT      ANALYST      7566 09-DEC-82      3000
20
      7876 ADAMS      CLERK      7788 12-JAN-83      1100
20
      7934 MILLER     CLERK      7782 23-JAN-82      1300
10
```

14 rows selected.

```
SQL> SELECT Deptno, SUM(Sal)
2 FROM Emp
3 GROUP BY Deptno;
```

DEPTNO	SUM(SAL)
30	9400
20	10875
10	8750

```
SQL> SELECT Deptno, Sal FROM Emp;
```

DEPTNO	SAL
10	5000
30	2850
10	2450
20	2975
30	1250
30	1600
30	1500
30	950
30	1250
20	3000
20	800
20	3000
20	1100
10	1300

14 rows selected.

```
SQL> ED
Wrote file afiedt.buf
```

```
1 SELECT Deptno, Sal FROM Emp
2* ORDER BY Deptno
SQL> /
```

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DEPTNO	SAL
10	5000
10	2450
10	1300
20	1100
20	3000
20	800
20	3000
20	2975
30	1250
30	950
30	1600
30	1250
30	2850
30	1500

14 rows selected.

SQL> cl scr

SQL> CONN SYSTEM

Connected.

SQL> GRANT QUERY REWRITE
2 TO SCOTT;

Grant succeeded.

SQL> GRANT
2 CREATE MATERIALIZED VIEW
3 TO SCOTT;

Grant succeeded.

SQL> GRANT ALTER SESSION
2 TO SCOTT;

Grant succeeded.

SQL> CONN SCOTT/TIGER

Connected.

SQL> ALTER SESSION
2 SET QUERY_REWRITE_ENABLED = TRUE;

Session altered.

SQL> cl scr

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```
SQL> SET AUTOTRACE ON EXPLAIN
SQL> cl scr
```

```
SQL> CREATE MATERIALIZED VIEW Emp_Sum
  2  ENABLE QUERY REWRITE
  3  AS
  4  SELECT Deptno , Job, SUM(Sal)
  5  FROM Emp
  6  GROUP BY Deptno, Job;
```

Materialized view created.

```
SQL> DESC Emp_Sum
Name                                         Null?
Type
-----
DEPTNO                                         NOT
NULL NUMBER(2)
JOB
VARCHAR2(9)
SUM(SAL)
NUMBER
```

```
SQL> SELECT * FROM TAB;
```

TNAME	TABTYPE	CLUSTERID
EMP_SUM	TABLE	
STUDENTS	TABLE	
DEPT	TABLE	
EMP	TABLE	
BONUS	TABLE	
SALGRADE	TABLE	
DUMMY	TABLE	
CUSTOMER	TABLE	
ORD	TABLE	
ITEM	TABLE	
PRODUCT	TABLE	
PRICE	TABLE	
SALES	VIEW	

13 rows selected.

Execution Plan

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ERROR:

ORA-01039: insufficient privileges on underlying objects of the view

SP2-0612: Error generating AUTOTRACE EXPLAIN report

SQL> cl scr

SQL> SELECT Deptno , Job, SUM(Sal)
2 FROM Emp
3 GROUP BY Deptno, Job;

DEPTNO	JOB	SUM(SAL)
20	MANAGER	2975
30	SALESMAN	5600
30	CLERK	950
20	CLERK	1900
10	PRESIDENT	5000
30	MANAGER	2850
10	CLERK	1300
10	MANAGER	2450
20	ANALYST	6000

9 rows selected.

Execution Plan

Plan hash value: 82228995

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				
0	SELECT STATEMENT		9	288	3
(0)	00:00:01				
1	MAT_VIEW REWRITE ACCESS FULL	EMP_SUM	9	288	3
(0)	00:00:01				

Note

- dynamic sampling used for this statement

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```
SQL> SELECT Deptno, SUM(Sal)
2 FROM Emp
3 GROUP BY Deptno;
```

DEPTNO	SUM(SAL)
30	9400
20	10875
10	8750

Execution Plan

Plan hash value: 2751693713

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				
0	SELECT STATEMENT		9	234	4
(25)	00:00:01				
1	HASH GROUP BY		9	234	4
(25)	00:00:01				
2	MAT_VIEW REWRITE ACCESS FULL	EMP_SUM	9	234	3
(0)	00:00:01				

Note

- dynamic sampling used for this statement

```
SQL> ED
Wrote file afledt.buf
```

```
1 SELECT Job, SUM(Sal)
2 FROM Emp
3* GROUP BY Job
```

```
SQL> /
```

JOB	SUM(SAL)
SALESMAN	5600
CLERK	4150

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```
PRESIDENT      5000
MANAGER        8275
ANALYST        6000
```

Execution Plan

Plan hash value: 2751693713

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				
0	SELECT STATEMENT		9	171	4
(25)	00:00:01				
1	HASH GROUP BY		9	171	4
(25)	00:00:01				
2	MAT_VIEW REWRITE ACCESS FULL	EMP_SUM	9	171	3
(0)	00:00:01				

Note

- dynamic sampling used for this statement

SQL> SELECT SUM(Sal) FROM Emp;

SUM(SAL)

29025

Execution Plan

Plan hash value: 4050022887

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				
0	SELECT STATEMENT		1	13	3
(0)	00:00:01				

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```
-----
| 1 | SORT AGGREGATE | | 1 | 13 |
| | | | | |
| 2 | MAT_VIEW REWRITE ACCESS FULL| EMP_SUM | 9 | 117 | 3
(0) | 00:00:01 |
-----
```

Note

- dynamic sampling used for this statement

SQL> ED

Wrote file afiedt.buf

```
1 SELECT Deptno, SUM(Sal)
2 FROM Emp
3* GROUP BY ROLLUP (Deptno)
SQL> /
```

```
DEPTNO    SUM(SAL)
-----
10         8750
20        10875
30         9400
          29025
```

Execution Plan

Plan hash value: 2868327837

```
-----
| Id | Operation | Name | Rows | Bytes | Cost
|----|-----|-----|-----|-----|-----
| 0 | SELECT STATEMENT | | 9 | 234 | 4
(25) | 00:00:01 | | | |
| 1 | SORT GROUP BY ROLLUP | | 9 | 234 | 4
(25) | 00:00:01 | | | |
| 2 | MAT_VIEW REWRITE ACCESS FULL| EMP_SUM | 9 | 234 | 3
(0) | 00:00:01 | | | |
-----
```

Note

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- dynamic sampling used for this statement

SQL> ED

Wrote file afiedt.buf

```
1  SELECT Job, SUM(Sal)
2  FROM Emp
3* GROUP BY ROLLUP(Job)
SQL> /
```

JOB	SUM(SAL)
ANALYST	6000
CLERK	4150
MANAGER	8275
PRESIDENT	5000
SALESMAN	5600
	29025

6 rows selected.

Execution Plan

Plan hash value: 2868327837

Id	Operation	Name	Rows	Bytes	Cost
0	SELECT STATEMENT		9	171	4
(25)	00:00:01				
1	SORT GROUP BY ROLLUP		9	171	4
(25)	00:00:01				
2	MAT_VIEW REWRITE ACCESS FULL	EMP_SUM	9	171	3
(0)	00:00:01				

Note

- dynamic sampling used for this statement

SQL> ED

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```
1  SELECT Deptno, Job, SUM(Sal)
2  FROM Emp
3* GROUP BY ROLLUP(Deptno, Job)
SQL> /
```

DEPTNO	JOB	SUM(SAL)
10	CLERK	1300
10	MANAGER	2450
10	PRESIDENT	5000
10		8750
20	CLERK	1900
20	ANALYST	6000
20	MANAGER	2975
20		10875
30	CLERK	950
30	MANAGER	2850
30	SALESMAN	5600
30		9400
		29025

13 rows selected.

Execution Plan

Plan hash value: 2868327887

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				
0	SELECT STATEMENT		9	288	4
(25)	00:00:01				
1	SORT GROUP BY ROLLUP		9	288	4
(25)	00:00:01				
2	MAT_VIEW REWRITE ACCESS FULL	EMP_SUM	9	288	3
(0)	00:00:01				

Note

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- dynamic sampling used for this statement

SQL> ED

Wrote file afiedt.buf

```
1  SELECT Deptno, Job, SUM(Sal)
2  FROM Emp
3* GROUP BY CUBE(Deptno, Job)
SQL> /
```

DEPTNO	JOB	SUM(SAL)
		29025
	CLERK	4150
	ANALYST	6000
	MANAGER	8275
	SALESMAN	5600
	PRESIDENT	5000
10		8750
10	CLERK	1300
10	MANAGER	2450
10	PRESIDENT	5000
20		10875
20	CLERK	1900
20	ANALYST	6000
20	MANAGER	2975
30		9400
30	CLERK	950
30	MANAGER	2850
30	SALESMAN	5600

18 rows selected.

Execution Plan

Plan hash value: 1797585325

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				
0	SELECT STATEMENT		9	288	4
(25)	00:00:01				

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```
.....
| 1 | SORT GROUP BY | | 9 | 288 | 4
(25)| 00:00:01 |
| 2 | GENERATE CUBE | | 9 | 288 | 4
(25)| 00:00:01 |
| 3 | SORT GROUP BY | | 9 | 288 | 4
(25)| 00:00:01 |
| 4 | MAT_VIEW REWRITE ACCESS FULL| EMP_SUM | 9 | 288 | 3
(0)| 00:00:01 |
-----
```

Note

- dynamic sampling used for this statement

SQL> ED

Wrote file afiedt.buf

```
1 SELECT Deptno, Job, SUM(Sal)
2 FROM Emp
3* GROUP BY Deptno, CUBE(Job)
SQL> /
```

DEPTNO	JOB	SUM(SAL)
10		8750
10	CLERK	1300
10	MANAGER	2450
10	PRESIDENT	5000
20		10875
20	CLERK	1900
20	ANALYST	6000
20	MANAGER	2975
30		9400
30	CLERK	950
30	MANAGER	2850
30	SALESMAN	5600

12 rows selected.

Execution Plan

Plan hash value: 1797585325

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```
-----
| Id | Operation | Name | Rows | Bytes | Cost
(%CPU) | Time |
-----
| 0 | SELECT STATEMENT | | 9 | 288 | 4
(25) | 00:00:01 |
| 1 | SORT GROUP BY | | 9 | 288 | 4
(25) | 00:00:01 |
| 2 | GENERATE CUBE | | 9 | 288 | 4
(25) | 00:00:01 |
| 3 | SORT GROUP BY | | 9 | 288 | 4
(25) | 00:00:01 |
| 4 | MAT_VIEW REWRITE ACCESS FULL | EMP_SUM | 9 | 288 | 3
(0) | 00:00:01 |
-----
```

Note

- dynamic sampling used for this statement

SQL> ED

Wrote file afiedt.buf

```
1 SELECT Deptno, Job, SUM(Sal)
2 FROM Emp
3* GROUP BY Deptno, ROLLUP (Job)
SQL> /
```

DEPTNO	JOB	SUM(SAL)
10	CLERK	1300
10	MANAGER	2450
10	PRESIDENT	5000
10		8750
20	CLERK	1900
20	ANALYST	6000
20	MANAGER	2975
20		10875
30	CLERK	950
30	MANAGER	2850
30	SALESMAN	5600
30		9400

12 rows selected.

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Execution Plan

Plan hash value: 2868327837

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				
0	SELECT STATEMENT		9	288	4
(25)	00:00:01				
1	SORT GROUP BY ROLLUP		9	288	4
(25)	00:00:01				
2	MAT_VIEW REWRITE ACCESS FULL	EMP_SUM	9	288	3
(0)	00:00:01				

Note

- dynamic sampling used for this statement

SQL> ED

Wrote file afiedt.buf

```
1  SELECT Deptno, Job, SUM(Sal)
2  FROM Emp
3* GROUP BY GROUPING_SETS(Deptno, Job)
SQL> /
GROUP BY GROUPING_SETS(Deptno, Job)
*
ERROR at line 3:
ORA-00904: "GROUPING_SETS": invalid identifier
```

SQL> ED

Wrote file afiedt.buf

```
1  SELECT Deptno, Job, SUM(Sal)
2  FROM Emp
3* GROUP BY GROUPING SETS(Deptno, Job)
SQL> /
```

DEPTNO	JOB	SUM(SAL)
30		9400

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```
20          10875
10          8750
  SALESMAN    5600
  CLERK       4150
  PRESIDENT   5000
  MANAGER     8275
  ANALYST     6000
```

8 rows selected.

Execution Plan

Plan hash value: 501246138

Id	Operation	Name	Rows
Bytes	Cost (%CPU) Time		
0	SELECT STATEMENT		9
288	11 (19) 00:00:01		
1	TEMP TABLE TRANSFORMATION		
2	LOAD AS SELECT		
3	MAT_VIEW ACCESS FULL	EMP_SUM	9
288	3 (0) 00:00:01		
4	LOAD AS SELECT		
5	HASH GROUP BY		1
26	3 (34) 00:00:01		
6	TABLE ACCESS FULL	SYS_TEMP_0FD9D6608_A90440	1
26	2 (0) 00:00:01		
7	LOAD AS SELECT		
8	HASH GROUP BY		1
19	3 (34) 00:00:01		
9	TABLE ACCESS FULL	SYS_TEMP_0FD9D6608_A90440	1
19	2 (0) 00:00:01		
10	VIEW		1
32	2 (0) 00:00:01		
11	TABLE ACCESS FULL	SYS_TEMP_0FD9D6609_A90440	1
32	2 (0) 00:00:01		

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Note

- dynamic sampling used for this statement

SQL> cl scr

```
SQL> SELECT
  2 Deptno,
  3 Job,
  4 MGR,
  5 TO_CHAR(HireDate, 'YYYY') Year,
  6 TO_CHAR(HireDate, 'Q') Quarter,
  7 TO_CHAR(HireDate, 'Month') Months,
  8 TO_CHAR(HireDate, 'W') Week,
  9 TO_CHAR(HireDate, 'Day') Day,
10 SUM(Sal)
11 FROM Emp
12 GROUP BY
13 GROUPING SETS
14 (
15 Deptno,
16 Job,
17 MGR,
18 TO_CHAR(HireDate, 'YYYY'),
19 TO_CHAR(HireDate, 'Q'),
20 TO_CHAR(HireDate, 'Month'),
21 TO_CHAR(HireDate, 'W'),
22 TO_CHAR(HireDate, 'Day')
23 );
```

DEPTNO	JOB	MGR	YEAR	Q	MONTHS	W	DAY	SUM(SAL)
30								9400
20								10875
10								8750
	SALESMAN							5600
	CLERK							4150
	PRESIDENT							5000
	MANAGER							8275
	ANALYST							6000
		7839						5000
		7782						8275
		7698						1300
		7902						6550
		7566						800
								6000

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```

7788
1980
1983
1982
1981
1
3
4
2
September
December
January
June
November
April
February
May
1
3
2
4
Sunday
Friday
1100
800
1100
4300
22825
5250
2750
12750
8275
2750
7750
2400
2450
5000
2975
2850
2850
9775
7400
8050
3800
1250
4450

```

DEPTNO	JOB	MGR	YEAR	Q	MONTHS	W	DAY	SUM(SAL)
							Thursday	9925
							Monday	1250
							Wednesday	1900
							Tuesday	8950
							Saturday	1300

42 rows selected.

Execution Plan

Plan hash value: 3519311798

Id	Operation	Name	Rows
0	SELECT STATEMENT		14
910	29 (28)	00:00:01	

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1	TEMP TABLE TRANSFORMATION		
2	LOAD AS SELECT		
3	TABLE ACCESS FULL	EMP	14
756	3 (0) 00:00:01		
4	LOAD AS SELECT		
5	HASH GROUP BY		1
26	3 (34) 00:00:01		
6	TABLE ACCESS FULL	SYS_TEMP_0FD9D660E_A90440	1
26	2 (0) 00:00:01		
7	LOAD AS SELECT		
8	HASH GROUP BY		1
19	3 (34) 00:00:01		
9	TABLE ACCESS FULL	SYS_TEMP_0FD9D660E_A90440	1
19	2 (0) 00:00:01		
10	LOAD AS SELECT		
11	HASH GROUP BY		1
26	3 (34) 00:00:01		
12	TABLE ACCESS FULL	SYS_TEMP_0FD9D660E_A90440	1
26	2 (0) 00:00:01		
13	LOAD AS SELECT		
14	HASH GROUP BY		1
17	3 (34) 00:00:01		
15	TABLE ACCESS FULL	SYS_TEMP_0FD9D660E_A90440	1
17	2 (0) 00:00:01		
16	LOAD AS SELECT		
17	HASH GROUP BY		1
15	3 (34) 00:00:01		
18	TABLE ACCESS FULL	SYS_TEMP_0FD9D660E_A90440	1
15	2 (0) 00:00:01		
19	LOAD AS SELECT		
20	HASH GROUP BY		1
19	3 (34) 00:00:01		
21	TABLE ACCESS FULL	SYS_TEMP_0FD9D660E_A90440	1
19	2 (0) 00:00:01		
22	LOAD AS SELECT		
23	HASH GROUP BY		1
15	3 (34) 00:00:01		

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```
-----
| 24 |      TABLE ACCESS FULL      | SYS_TEMP_0FD9D660E_A90440 |      1 |
15 |      2      (0) | 00:00:01 |
| 25 |      LOAD AS SELECT            |                          |      |
|      |      |      |
| 26 |      HASH GROUP BY            |                          |      1 |
19 |      3      (34) | 00:00:01 |
| 27 |      TABLE ACCESS FULL      | SYS_TEMP_0FD9D660E_A90440 |      1 |
19 |      2      (0) | 00:00:01 |
| 28 |      VIEW                      |                          |      1 |
65 |      2      (0) | 00:00:01 |
| 29 |      TABLE ACCESS FULL      | SYS_TEMP_0FD9D660F_A90440 |      1 |
65 |      2      (0) | 00:00:01 |
-----
```

Note

- dynamic sampling used for this statement

SQL> ED

Wrote file afiedt.buf

```
1  CREATE MATERIALIZED VIEW MySubTot
2  ENABLE QUERY REWRITE
3  AS
4  SELECT
5  Deptno,
6  Job,
7  MGR,
8  TO_CHAR(HireDate, 'YYYY') Year,
9  TO_CHAR(HireDate, 'Q') Quarter,
10 TO_CHAR(HireDate, 'Month') Months,
11 TO_CHAR(HireDate, 'W') Week,
12 TO_CHAR(HireDate, 'Day') Day,
13 SUM(Sal)
14 FROM Emp
15 GROUP BY
16 GROUPING SETS
17 (
18  Deptno,
19  Job,
20  MGR,
21  TO_CHAR(HireDate, 'YYYY'),
22  TO_CHAR(HireDate, 'Q'),
23  TO_CHAR(HireDate, 'Month'),
24  TO_CHAR(HireDate, 'W'),
25  TO_CHAR(HireDate, 'Day'))
```

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```
26* )
SQL> /
```

Materialized view created.

```
SQL> ED
Wrote file afiedt.buf
```

```
1  SELECT
2  Deptno,
3  Job,
4  MGR,
5  TO_CHAR(HireDate, 'YYYY') Year,
6  TO_CHAR(HireDate, 'Q') Quarter,
7  TO_CHAR(HireDate, 'Month') Months,
8  TO_CHAR(HireDate, 'W') Week,
9  TO_CHAR(HireDate, 'Day') Day,
10 SUM(Sal)
11 FROM Emp
12 GROUP BY
13 GROUPING SETS
14 (
15 Deptno,
16 Job,
17 MGR,
18 TO_CHAR(HireDate, 'YYYY'),
19 TO_CHAR(HireDate, 'Q'),
20 TO_CHAR(HireDate, 'Month'),
21 TO_CHAR(HireDate, 'W'),
22 TO_CHAR(HireDate, 'Day')
23* )
SQL> /
```

DEPTNO	JOB	MGR	YEAR	Q	MONTHS	W	DAY	SUM(SAL)
30								9400
20								10875
10								8750
	SALESMAN							5600
	CLERK							4150
	PRESIDENT							5000
	MANAGER							8275
	ANALYST							6000
								5000
		7839						8275
		7782						1300
		7698						6550

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```

7902      800
7566     6000
7788     1100
      1980      800
      1983     1100
      1982     4300
      1981    22825
          1     5250
          3     2750
          4    12750
          2     8275
          September 2750
          December  7750
          January   2400
          June      2450
          November  5000
          April     2975
          February  2850
          May       2850
              1     9775
              3     7400
              2     8050
              4     3800
              Sunday 1250
              Friday 4450
  
```

DEPTNO	JOB	MGR	YEAR	Q	MONTHS	W	DAY	SUM(SAL)
							Thursday	9925
							Monday	1250
							Wednesday	1900
							Tuesday	8950
							Saturday	1300

42 rows selected.

Execution Plan

Plan hash value: 1646132919

Id	Operation	Name	Rows	Bytes	Cost
(%CPU)	Time				

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```
.....
| 0 | SELECT STATEMENT | | 42 | 2730 | 3
(0) | 00:00:01 |
| 1 | MAT_VIEW REWRITE ACCESS FULL| MYSUBTOT | 42 | 2730 | 3
(0) | 00:00:01 |
-----
```

Note

- dynamic sampling used for this statement

SQL> SPOOL OFF

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